



Freeze-dried kit formulation of ^{177}Lu - and ^{90}Y -labeled immunoconjugates of Trastuzumab – formulation and characterization



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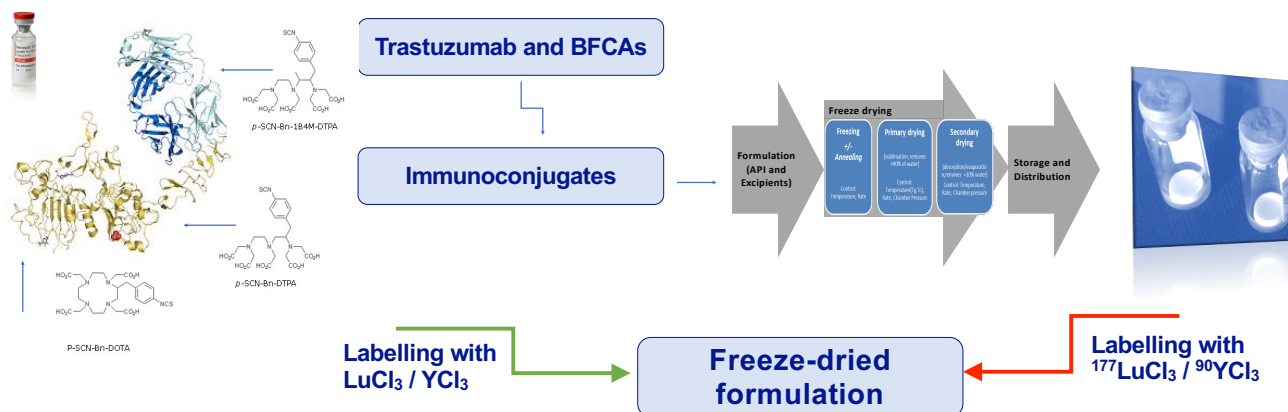
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Introduction

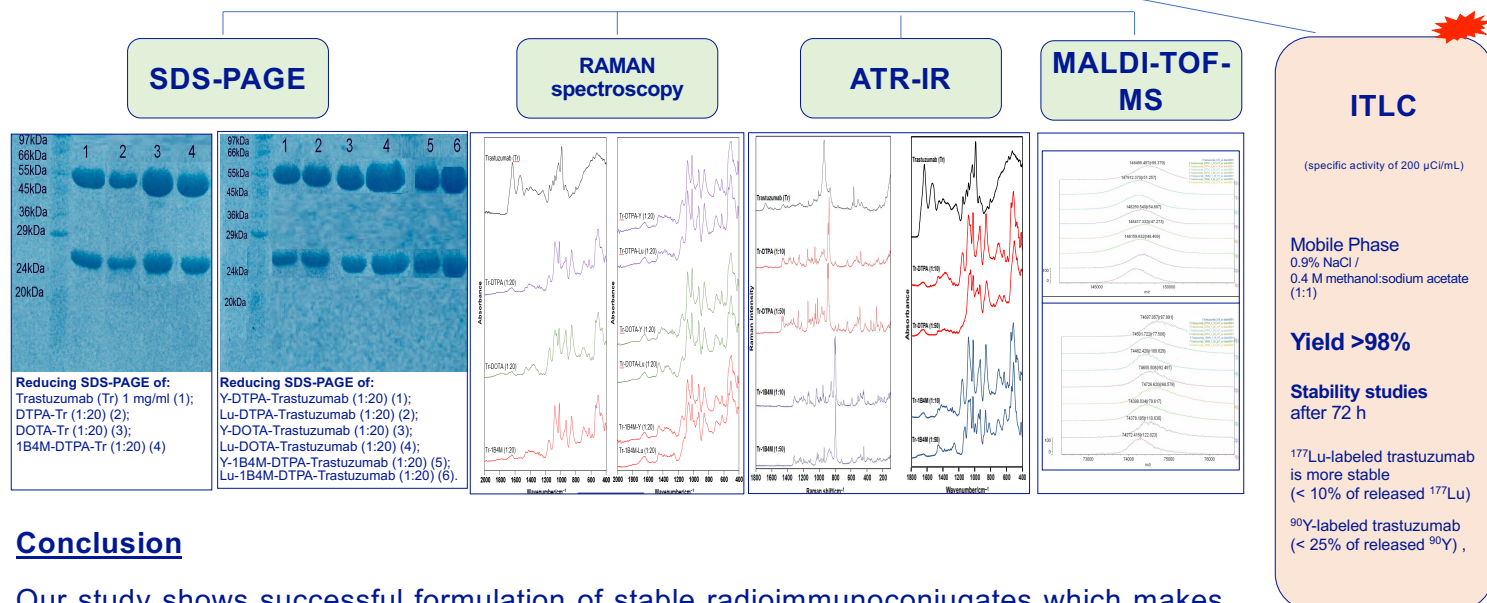
Trastuzumab is a humanized IgG1 monoclonal antibody for treatment of HER2 positive breast cancer. Due to the significant potency in various malignancies and easy detection of radioactivity with outside scintigraphy, radioimmunoconjugates have become a part of many clinical trials.

The aim of this study is to formulate a stable freeze-dried trastuzumab-immunoconjugates with bifunctional chelators (BFCAs): *p*-SCN-Bn-DTPA, *p*-SCN-Bn-DOTA, *p*-SCN-Bn-1B4M-DTPA, to evaluate and provide valuable molecular structure information including verification of changes after antibody manipulation and exposure to stress conditions during the processes of conjugation, freeze-drying and labeling with non-radioactive LuCl_3 and YCl_3 and radioactive $^{177}\text{LuCl}_3$ and $^{90}\text{YCl}_3$.

Material and Methods



Results



Conclusion

Our study shows successful formulation of stable radioimmunoconjugates which makes this proposed freeze-dried kit as potential radiopharmaceutical *in vivo* investigations.